UL'YANOV, N.A., kand.tekhn.nauk

Evaluating tractive properties of wheel drives in earthmoving machines. Stroi.i dor.mashinostr. 5 no.3:16-20 Mr '60. (MIRA 13:6)
(Traction engines)
(Earthmoving machinery)

MIKHAYLOV, B.I., inzh.; UL'YANOV, N.A., kand.tekhn.nauk

Automatic adjustment of motor grader operations. Stroi.i dor. mashinostr. 5 no.7:6-7 Jl '60. (MIRA 13:7)
(Automatic control)
(Graders (Earthmoving machinery))

UL'YANOV, N. A., dotsent, kand. tekhn. nauk

Choice of parameters and operating conditions of a wheel-mounted motor of continuous earthmovers with cutting blades. Sbor. trud. MISI no.39:268-274 '61. (MIRA 16:4)

(Earthmoving machinery)

UL'YANOV, Nikolay Aleksandrovich, kand. tekhn. nauk; BAZANOV, A.F., kand.tekhn.nauk, retsenzent; KONONENKO, M.A., inzh., red SAVEL'YEV, Ye.Ya., red.izd-va; SMIRNOVA, G.V., tekhn.red.

[Fundamentals of the theory and design of wheeled tractors for excavating machinery] Osnovy teorii i rascheta kolesnogo dvizhitelia zemleroinykh mashin. Moskva, Mashgiz, 1962. 206 p. (MIRA 16:4)

(Tractors—Design and construction)
(Excavating machinery)

UL'YANOV, N.A., kand.tekhn.nauk

Method of making traction computations for rollers on pneumatic tires. Stroi. i dor. mash. 7 no.8:15-16 Ag '62. (MIRA 15:9)

(Rollers (Earthwork))

ALEKSEYEVA, T.V., kand. tekhn. nauk; ARTEM'YEV, K.A., kand. tekhn. nauk; BROMBERG, A.A., prof.; VOYTSEKHOVSKIY, R.I., inzh.; UL'YANOV, N.A., kand. tekhn. nauk; Prinimal uchastiye KONONENKO, M.A., inzh.; FEDOROV, D.I., kand. tekhn. nauk, retsenzent.

[Machines for earthwork; theory and calculation] Mashiny dlia zemlianykh rabot; teoriia i raschet. [By] T.V. Alekseeva i dr. Izd.2., perer. i dop. Moskva, Izd-vo "Mashinostroenie," 1964. 467 p. (MIRA 17:5)

UL'YANOV, N.G.

Testing an experimental hydraulic clutch in a ZIS-150 car. Sborn.trud. lab.prob.bystr.mash. 3:205-213 '53. (MIRA 9:9)
(Automobile--Transmission devices)

VASIL'YEVA, N.N.; UL'YANOV, N.K.

Geobotanical studies as a method of prospecting for ore deposits in central Kazakhstan. Inform.sbor.VSEGEI no.50:83-94 '61. (MIRA 15:8)

(Kazakhstan—Prospecting) (Kazakhstan—Phytogeography)

TSYKUNKOVA, N.A.; UL'YANOV, N.K.

Occurrences of metals in eluvial and talus formations of some ore deposits in central Kazakhstan. Inform.sbor.VSEGEI no.50:71-81 '61. (MIRA 15:8)

(Kazakhstan--Metals, Rare and minor)
(Kazakhstan--Nonferrous metals)

MAROCHKIN, N.I., glav. red.; MARKOVSKIY, A.P., zam. glav. red.; UL'YANOV, N.K., zam. glav. red.; GANESHIN, G.S., red.; ZAYTSEV, I.K., red.; KNIPOVICH, Yu.N., red.; KULIKOV, M.V., red.; LABAZIN, G.S., red.; LUR'YE, M.L., red.; SIMONENKO, T.N., red.; SPIZHARSKIY, T.N., red.; STERLIN, D.Ya., red.; TATARINOV, P.M., red.; BELYAKOVA, Ye.Ye., nauchnyy red.; MAKRUSHIN, V.A., tekhn. red.

[Yearbook of the results of studies by the All-Union Geological Institut] Ezhegodnik po rezul'tatam rabot VSEGEI. Leningrad, Otdel nauchn.-tekhn. informatsii, 1961. 203 p. (Leningrad. Vsesoiyznyi geologicheskii institut. Informatsionnyi sbornik, no.49.) (MIRA 15:6)

(Geology)

UL'YANOV, N.N., inzh.; SHPORKHUN, V.I., inzh.

Distributing device for the refluxing of packed columns. Khim. mashinostr. no.3:3-4 My-Je '63. (MIRA 16:11)

ARUTYUNYAN, B.Sh.; BORISOV, V.M.; ZHEPLINSKIY, B.M.; MESROPYAN, N.N.; MESHCHERYAKOV, N.F.; UL'YANOV, N.S.

Apparatus for the destruction of flotation froth. Khim. prom. no.2:146-147 F '63. (MIRA 16:7)

(Flotation)

PROCESSES AND PROPERTIES INDEX

Concentration of phosphorites. N. S. Ul'yanov. *Bull. acad. sci. U. R. S. S., Classe sci. math. nat., Sér. chim.* **1938**, No. 1, 60-73 (in English 74).—The primary method of concn. now in practice yielded, at best, a concentrate contg. 25.6% of P_2O_5 and 6-7% of R_2O_3. An exptl. flotation of preliminary calcined phosphorite yielded a concentrate contg. P_2O_5 29.2 and R_2O_3 4.8% (the same phosphorite ore as above) and in some instances contg. even 30.1% of P_2O_5 and 5.5% of R_2O_3 (different ore). Of all concn. methods, flotation yielded the best results. Six references.

A. A. Podgorny

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

CA

18

Recent work and present problems in enriching phosphorite. N. S. Ul'yanov. *J. Chem. Ind.* (U. S. S. R.) 15 No. 11, 23-5(1938).—See *C. A.* 32, 8709[4]. H. M. L.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

18

Ca

Flotation on a semiproduction scale, with preliminary
roasting of the Ryazan-Akvilon ore from the Egor'ev ore
deposits. N. S. Ul'yanov, V. M. Vidonov and N. V.
Makarenko. (Nauch. Inst. Udobreniyam
Seryakh Rud, Sbornik Rabot Nauch. Inst. Udobreniyam
i Insektofungisidam Ya. V. Samoilova 1939, No. 150, 59-
73; Khim. Referat. Zhur. 1940, No. 6, 84.—Roasting the
washed Ryazan-Akvilov ore, before flotation, in a Poly-
sius type furnace for 40–60 min. improves considerably the
quality of the flotation concentrate, bringing the content
of P_2O_5 to 30·1% and R_2O_3 to 4.3–6.5%. Duration of the
basic flotation is 16 min. and purification of the concen-
trate 8 min. The amts. of the reagents used are soda 6.0–
6.5, acidole 6, kerosene 5 and water glass 0.75 kg./ton.
W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

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3RD AND 4TH ORDERS

18

Flotation of phosphorite ore of the Portland horizon of the Egor'ev ore deposits. N. S. Ul'yanov and V. M. Rzuchevskaya. *Obogashchenie Fosforitov, Glaukonitov i Seryvkh Rud, Sbornik Rabot Nauch. Inst. Udobreniyam i Insektofungisidam* Ya. V. Samoilova 1939, No. 150, 93-103; *Khim. Referat. Zhur.* 1940, No. 6, 84-5.—Washing the Portland ore on a 0.25-mm. screen produced a +0.25 mm. concentrate contg. P_2O_5 21.9, R_2O_3 9.4 and insol. residue 17.94%. The optimum fineness of the ore is 100 mesh, with not more than 7% of the residue remaining on the screen. The flotation reagents were: carboxylic acids 1.7, water glass 1.0 and lime 1.0 kg./ton. In the pulp the ratio solid: liquid was 1:4. After flotation, the concentrate contained P_2O_5 27.5-27.9, R_2O_3 3.9-4.5 and insol. residue 6.0-6.5%. The extn. was 91.1%. A 0.25-mm. flotation product produced a concentrate contg. 14-16% of P_2O_5, which can be used to produce phosphorite meal. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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3RD AND 4TH ORDERS

18

Flotation of the Upper Kama phosphorite ore deposits.
N. S. Ul'yanov. Obogashchenie Fosforitov, Glaukonitov i
Sernykh Rud, Sbornik Rabot Nauch. Inst. Udobreniyam i
Insektofungisidam Ya. V. Samoilova 1939, No. 150, 103-
20; Khim. Referat. Zhur. 1940, No. 6, 85.—Proper condi-
tions for flotation were developed from lab. and semi-
production expts. and a qual. and a quant. scheme for en-
riching the Upper Kama phosphorites prepd. The ore is
ground to 150 mesh (with a 5-10% residue in the sieve).
Flotation can be carried out without settling of the fine
slimes, with a 3-fold purification of the concentrate and a
single purification of the tailings. After the 3rd purifica-
tion the concentrate contained P_2O_5 27.5-27.6 and R_2O_3
4.37-4.70%. The P_2O_5 extn. was 93.4-95.8% of the
washed concentrate. The main flotation process took
13.5 min., purification of the concentrate 13.0-18.5 min.
and purification of the tailings 13 min. The reagents
used for the main flotation were carboxylic acid 2.98-3.00
and carboxylic acid salt 0.26 kg./ton. Purification of the
tailings required carboxylic acid 1.54-1.56 and carboxylic
acid salt 0.14 kg./ton. No water glass was required.

The Fahrenwald machines are suitable for flotation of
the Upper Kama phosphorites. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSES AND PROPERTIES INDEX

CA

1P

Flotation of the Upper Kama phosphorite ores with a preliminary roasting. N. S. Ul'yanov, V. M. Vidonov and V. G. Konstantinov. *Obogashchenie Fosforitov, Glaukonitov i Sernykh Rud, Sbornik Rabot Nauch. Inst. Udobreniyam i Insektofungisidam Ya. V. Samoilova* 1939, No. 150, 120-32; *Khim. Referat. Zhur.* 1940, No. 6, 85.—Washed concentrate, ground to 16-mm. mesh, was used for the preliminary roasting under semicom. conditions. The compn. of the concentrate was P_2O_5 22.3-23.79 and R_2O_3 8.46-9.31%. The roasting was done in Polysius furnaces having an output of 100-80 kg./hr. The losses were 7-8%. By flotation in a 12-chamber Fahrenwald machine 2 fractions were obtained, one of which (48% of the total) contained 30% P_2O_5 and 4% R_2O_3, and the other (52% of the total) contained 21.1% P_2O_5. The filtration rate in a disk vacuum filter was 429 kg./sq. m., as compared with 56 kg./sq. m. with the unroasted ore. The reagents used were soda 6.0-6.5, acidole 2, crude oil 0.6, kerosene 8.6 and water glass 0.2 kg./ton for the 1st purification and 0.15 kg./ton for the 2nd purification. The duration of the main flotation was 9 min., of the 1st purification 5.0-5.5 min., of the 2nd purification 8.0-8.5 min. and of the 3rd purification 16.0-16.5 min. The ratio solid:liquid in the pulp was 1:4. Cf. *C. A.* 36, 4678[9], and preceding abstr.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

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Ca

18

Flotation of phosphorite ore from the Shchigrov deposite. N. S. Ul'yanov and V. M. Kruchevskaya. *Obogashchenie Fosforitov, Glaukonitov i Seruykh Rud, Sbornik Rabot Nauch. Inst. Udobreniyam i Insektofungisidam Ya. V. Samoilova* 1939, No. 150, 145–51; *Khim. Referat. Zhur.* 1940, No. 6, 85–6.—The av. P_2O_5 content in the Shchigrov deposits is 12%. The raw material is ground to 150–200 mesh. Carboxylic acids are used as reagents. A concentrate was obtained contg. P_2O_5 25.5–26.0 and R_2O_3 3.7–4.1%; tailings contained P_2O_5 3.57%; extn. was 75–80%.

W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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3RD AND 4TH ORDERS

COMMON ELEMENTS

COMMON VARIABLES INDEX

18

Extraction of glauconite and phosphorite from the tailings of concentrating plants of the Egor'ev and Upper Kama deposits. N. S. Ul'yanov. *Obogashchenie Fosforitov, Glaukonitov i Sernykh Rud, Sbornik Robot Nauch. Inst. Udobreniyam i Insektofungisidam Ya. V. Samoilova* 1939, No. 160, 152-60; *Khim. Referat. Zhur.* 1940, No. 6, 86.— Enriching phosphorite ore from the Egor'ev and Upper Kama deposits gives low extn. of P_2O_5. The tailings contain not only phosphorite, but also glauconite (hydrous aluminosilicate of Fe, K, Ca, Mg), which is used for softening hard water. The method used to obtain the glauconite concentrate from tailings includes condensation, classification, drying, bolting, magnetic sepn. and roasting. The initial material, when ground to 60-5 mesh, contains a max. amt. of glauconite. The +0.6 mm. fraction, obtained during bolting, before the magnetic sepn., and the tailings of the sepd. fraction are used to enrich phosphorites. Flotation with dark naphtha soap gives a concentrate contg. 18-20% P_2O_5. Such enrichment increases the P_2O_5 extn. from 65-70 to 85%. A method for enriching the Egor'ev deposits ore is described. W. R. Henn

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

UL'YANOV, N.S.

"Extraction of Glauconite and Phosphorite from the Tailings of Concentrating plants of the Egor'yev and Upper Kama Depostis," N.S. Ul'yanov, Obogashcheniye Fosforitov, Glaukonitov i Sernykh Rud, Sbornik Rabot Nauch Inst Ubobreniyam i Insektofungisidam im Ya. V. Samoylov, 1939, No 150, pp 152-66; Khim Referat Zhur 1940, No 6, pp 86 (SEE: Inst. Insect/Fungi. in Ya. V. Samoylov)

SO: U-237/49, 8 April 1949

UL'YANOV, N. S.

"Flotation of Phosphorite Ore of the Portland Horizon of the Egor'yev Ore Deposits," -N. S. Ul'yanov, and V. M. Ezuchevskaya, (Above Periodical) pp 96-103, Khim Referat Khur 1940, No 6, pp 84-5 (SEE: Inst. Insect/Fungi. in Ya. V. Samoylov)

SO: U-237/49, 8 April 1949

UL'YANOV, N. S.

"Flotation of the Upper Kama Phosphorite Ore Deposits," N. S. Ul'yanov, Above Periodical pp 103-20; Khim Referat Zhur, 1940, No 6, 85 pp (SEE: Inst. Insect/Fungi. in Ya. V. Samoylov)

SO: U-237/49, 8 April 1949

UL'YANOV, N. S.

"Flotation of the Upper Kama Phosphorite Ores with a Preliminary Roasting," N. S. Ul'yanov, V. M. Vidonov, and V. G. Konstantimov, (Above Periodical) pp 120-132; Khim Referat Zhur 1940, No 6, pp 85 (SEE: Inst. Insect/Fungi. in Ya. V. Samoylov)

SO: U-237/49, 8 April 1949

UL'YANOV, N. S.

"Flotation of Phosphorite Ore from the Shchigrov Deposits," N. S. Ul'yanov, and V. M. Ezuchevskaya, (Above Periodical) pp 145-51, Khim Referat Zhur 1940, No, 6, pp 85-6 (SEE: Inst. Insect/ Fungi. in Ya. V. Samoylov)

SO: U-237/49, 8 April 1949

~~UL'YANOV, N. S.~~

"Flotation on a Semiproduction Scale, with Preliminary Roasting of the Ryazan-Akvilon Ore from the Egor'yev Ore Deposits," N. S. Ul'yanov, V. M. Vidonov, and N. V. Makarenko, (Above Periodical) ~~pp 59-73, Khim~~ Referat Zhur 1940, No 6 pp 84 (SEE: Inst. Insect/Fungi. in Ya. V. Samoylov)

SO: U-237/49, 8 April 1949

UL'YANOV, N.S.

USSR/Chemistry - Fertilizers

FD-3000

Card 1/1 Pub. 50-1/17

Author : Ul'yanov, N. S. *

Title : The most immediate tasks of the mined chemical raw materials industry

Periodical : Khim. prom. No 6, 321-324, Sep 1955

Abstract : Discusses the mining of phosphate and potassium minerals, suggesting improvements. On the basis of USA and German experience, recommends enrichment of potassium salts by flotation and expresses the opinion that the use of a hydrocyclone in combination with flotation methods is advisable. States that the gravitational method for the enrichment of Chulak-Tau and Ak-Say phosphorites is still in need of improvement, while enrichment of phosphorites by flotation has yielded good results. Says that research on the replacement of the autoclave method of melting out sulfur has lagged and should be expedited.

Institution : Main Administration of the Mined Chemical Raw Materials Industry (*Chief)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001857920015-3"

UL'YANOV, N.S.

Phosphate raw material and potassium fertilizers. Khim.prom. no.7: 430-432 O-N '57. (MIRA 10:12)
(Phosphates) (Potassium salts)

UL'YANOV, N.S.

Conference on problems of the development of the potash industry.
Khim. prom. no.1:54-55 Ja-F '58. (MIRA 11:3)
(Potash industry--Congresses)

Ul'yanov, N.S.

PHASE I BOOK EXPLOITATION SOV/4054

Akademiya nauk SSSR. Institut nauchnoy informatsii

Khimicheskaya promyshlennost' SSSR (The Chemical Industry of the USSR) Moscow, Goskhimizdat, 1959. 457 p. Errata slip inserted. 4,100 copies printed.

Sponsoring Agency: USSR. Gosudarstvennyy nauchno-tekhnicheskiy komitet.

Ed.: R. S. Roms; Tech. Ed.: P. V. Pogudkin; Editorial Board: A. F. Vinogradov, S. I. Vol'fkovich, N. M. Zhavoronkov, M. I. Ivanov, V. S. Kiselev, I. A. Lunacharskaya (Scientific Secretary), S. S. Medvedev, B. D. Mel'nik, A. N. Planovskiy, A. Ya. Ryabenko (Chief Ed.), and A. V. Topchiyev.

PURPOSE: This book is intended for the personnel of the chemical industry. It will be of interest to the general reader interested in the development and structure of the Soviet chemical industry.

COVERAGE: This book contains 13 articles on various aspects of the Soviet chemical industry. Among the developments in the production of raw materials for the manufacture of chemical products discussed are: 1) the use of raw materials synthesized from natural gas and petroleum to replace food products in the production of synthetic rubber, alcohol, detergents, etc.; 2) the production of acetylene from natural and petroleum gases for the synthesis of vinyl chloride, acrilonitrile, chloroprene, trichloroprene, 1, 4-butadiene, and other organic substances, based on methods developed by M. G. Kucherov, A.Ye. Favorskiy and others; 3) the production of acetylene from saturated hydrocarbons by cracking methane (and its homologs) at 1450° in an electric arc between two special electrodes in a gas reactor, by pyrolysis (thermal oxidation) of methane in an improved furnace designed by B. S. Grinenko, by high-temperature pyrolysis of propane and butane in tubular furnaces, or by other methods of producing acetylene for the production of synthetic rubber, ethyl alcohol, and other organic substances; 4) the synthesis of halogen derivatives of aliphatic hydrocarbons for the production of solvents, refrigerants, pharmaceutical products, etc., and 5) the production of rubber accelerators from nitrogen-containing aliphatic hydrocarbons. The history of plastics production in the Soviet Union is reviewed, and names, locations, and products of plants as well as the names of outstanding personalities in the field are given. The technical level and prospects of further development of different branches of the plastics industries are also discussed

along with methods of manufacturing plastic articles. A special apparatus designed by Ye. M. Mogilevskiy and designated "VA" which permits preparation of viscose solution in one operation is discussed. It is being used to replace the complex, conventional equipment with great savings in space. General trends in the technology of synthetic fiber production are also discussed. A historical review of synthetic rubber production and the achievements of outstanding Soviet scientists in this field are given as well as names, locations and products of synthetic rubber plants. Rubber production and the manufacture of rubber goods are similarly reviewed. Statistical data and outstanding personalities in the development of the aniline dyes, paints and lacquers, mineral fertilizers, insecticides and fungicides, sulfuric acid, soda, mineral salts, radioactive and stable isotopes, and chemical reagents industries are given. Catalytic processes and automation and automatic devices used in the chemical industry are also discussed. Thirty-eight photographs included in the book show outside and interior views of some Soviet chemical industry plants, as well as their manufacturing, material-handling and laboratory equipment. Numerous personalities and facilities are identified in the body of the text. References accompany individual articles.

Card 5/6

UL'YANOV, Nikolay Yegorovich; LISTOV, I.V., red.; MEL'NIKOV, V.I., tekhn. red.

[Outstanding people of Luzino] Znatnye liudi Luzino. Omsk, Omskoe knizhnoe izdatel'stvo, 1960. 70 p. (MIRA 14:12)
(Ul'yanovskii District (Omsk Province)—Agricultural workers)

LEKAYE, V.M.; YELKIN, L.N.; UL'YANOV, N.S., kand. tekhn. nauk, red.

[Modern methods of sulfur recovery from sulfur ores] Sovremennye sposoby polucheniia sery iz sernykh rud; uchebnoe posobie. Moskva, Mosk. khimiko-tekhnolog. in-t im. D.I.Mendeleyeva, 1961. 75 p. (MIRA 16:10)

(Sulfur)

UL'YANOV, N.S.

Problems in the development of mining, ore dressing, and chemical processing industries. Gor. zhur. no.5:3-5 My '63. (MIRA 16:5)

1. Gosudarstvennyy komitet po khimii pri Gosplane SSSR.
(Apatite) (Phosphates) (Potassium) (Sulfur)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001857920015-3"

TITLE:

CITED SOURCE: Nauchn. tr. vuzov Povolzh'ya, vyp. 1, 1963, 225-233

that the process of compensation at the usually encountered [illegible] to [illegible] proceeds much faster and at lesser error levels when a phase sensitive galvanometer is employed. ?

The comparative error introduced by the sensitive unit in such cases will be only 1. [illegible]

capable of rapid compensation at greater accuracy ... related to the

Card 3/3

UL'YANOV, O.I.

Designing a ferrodynamic galvanometer. Izv.vys.ucheb.zav.; prib. 7 no.2:46-52 '64. (MIRA 18:4)

1. Kuybyshevskiy politekhnicheskiy institut imeni Kuybysheva. Rekomendovana kafedroy izmeritel'noy tekhniki.

UL'YANOV, P., polkovnik.

The eastern Pomeranian operation. Voen.znan. 29 no.9:10-11 S '53.
(MLRA 6:12)

(World War, 1939-1945--Campaigns)

UL'YANOV, P. (Astrakhan')

Cost accounting courses for radio operators. Radio no.8:40 Ag '56.
(Astrakhan Province--Radio--Study and teaching) (MLRA 9:10)

ABRAMOV, A.A., redaktor; BOLTYANSKIY, V.G., redaktor; VASIL'YEV, A.M., redaktor; MEDVEDEV, B.V., redaktor; MYSHKIS, A.D., redaktor; NIKOL'SKIY, S.M., otvetstvennyy redaktor; POSTNIKOV, A.G., redaktor; PROKHOROV, Yu.V., redaktor; RYBNIKOV, K.A., redaktor; UL'YANOV, P.L., redaktor; USPENSKIY, V.A., redaktor; CHETAYEV, N.G., redaktor; SHILOV, G.Ye., redaktor; SHIRSHOV, A.I., redaktor; SIMKINA, Ye.N., tekhnicheskikh redaktor

[Proceedings of the third All-Union mathematical congress] Trudy tret'ego vsesoiuznogo matematicheskogo s"ezda. Moskva, Izd-vo Akademii nauk SSSR. Vol.1. [Reports of the sections] Sektsionnye doklady. 1956. 236 p. (MLRA 9:7)

1. Vsesoyuznyy matematicheskiy s"yezd.3rd Moscow, 1956. (Mathematics)

BEREZOVIKO, P.; KOZHEVNIKOV, N., inzh.-tekhnolog; MEL'NIKOV, A.;
UL'YANOV, P., konditer

Advice to the cook. Obshchestv.pit. no.11:16-17 N '59.
(MIRA 13:3)

1. Upravleniye rabochego snabzheniya Sverdlovskogo sovnarkhoza
(for Kozhevnikov).
(Cookery)

UL'YANOV, P.

Party organization of the interfarm building organizations. Sel'.stroi. 15 no.8:12-14 Ag '60. (MIRA 13:8)

1. Sekretar' partorganizatsii Gul'kevichskogo mezhkolkhozstroya Krasnodarskogo kraya.
(Krasnodar Territory--Building)
(Collective farms--Interfarm cooperation)

UL'YANOV, P., kand.economicheskikh nauk

Socialist economy is the indestructible basis for our country's defenses.
Tyl i snab.Sov.Voor.Sil 21 no.2:10-15 F '61. (MIRA 14:6)
(Russia—Economic conditions)

UL'YANOV, P., kand.ekonomicheskikh nauk

Communism is an abundance. Komm.Vooruzh.Sil 2 no.3:39-47 F '62.
(MIRA 15:1)
(Cost and standard of living)

УЛЬЯНОВ, П.А.

AID Nr 971-17 20 May

VACUUM CLADDING OF REFRACTORY METALS (USSR)

Ul'yanov, P. A., N. D. Tarasov, and S. F. Koftun. Tsvetnyye metally, no. 3, Mar 1963, 74-76. S/136/63/000/003/003/004

The cladding of Nb, Mo, and Ta with 1X18H9T [AISI-321] stainless steel, Nichrome, ЭИ-602 alloy [3% Fe, 0.35-0.75% Al and Ti, 0.4% Mn, 19-22% Cr, 1.8-2.3% Mo, 0.8% Si, 0.08% C, 1.3-1.8% Nb], and zirconium has been investigated experimentally. Cladding was performed in a vacuum rolling mill designed by the Physicotechnical Institute of the Ukrainian Academy of Sciences. Refractory billets were mechanically cleaned or pickled, spot welded or riveted to the cladding material, heated in vacuum to the rolling temperature, and then rolled to the required thickness. Pressure in the vacuum system during heating and rolling was maintained at $4 \cdot 10^{-5}$ mm Hg or lower. In order to prevent work hardening, the rolling temperature was maintained above that of the recrystallization of the rolled metal. The strength of the

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AID Nr. 971-17 20 May

VACUUM CLADDING [Cont'd] S/136/63/000/003/003/004

bond between the cladding and the base metal was found to increase with increasing reduction and with higher rolling temperatures. Microhardness tests showed that Mo and Cr-Ni alloy claddings do not form chemical compounds in the interface zone. A sharp increase of interface microhardness from ~ 230 to 740 kg/mm² was observed in Nb clad with ЭИ-602 alloy. Some hardness increase was observed in Nb clad with Zr or Ti. Aging at 1200°C for 2 hrs had little or no effect on the structure or strength of the bond between Mo or Nb and Cr-Ni alloy cladding; aging at 1200°C for 10 hrs increased bond strength by 15-20%. Shear strength of the bond between niobium and zirconium cladding rolled at 1100°C with reductions of 20 or 40% was ~ 30 or 64 kg/mm², respectively, and that between molybdenum and ЭИ-602 cladding rolled at 1190°C with reductions of 20 or 45% was ~ 28 or 43 kg/mm², respectively. [AZ]

Card 2/2

UL'YANOV, P.L.

Series in Haar's system. Vest. Mosk. un. Ser. 1: Mat., mekh. 20 no.4:35-43 Jl-Ag '65. (MIRA 18:9)

1. Kafedra teorii funktsii i funktsional'nogo analiza Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova.

ULYANOV, P. L.

USSR.

Ul'yanov, P. L. On some equivalent conditions of convergence of series and integrals. Uspehi Matem. Nauk (N.S.) 8 no. 6(58), 133-141 (1953). (Russian) 1 - F/W

Suppose [illegible] and has the Fourier coefficients [illegible] of the integral [illegible] $f(x+t)-f(x-t)$ [illegible] $dt\,dx$ and the series [illegible], where the function $\alpha(t)$ and the sequence [illegible] depend [illegible] on each other (given $\alpha(t)$ or $\omega(k)$) [illegible] shown how to find the [illegible] non-negative non-decreasing [illegible] for which [illegible] $\omega(k)$ is chosen as [illegible] respectively. In the case [illegible] and the equivalence reduces to the well known theorem of Plessner. In some cases when the sequence $\omega(k)$ increases too rapidly the finiteness of the series is equivalent to that of the integral obtained by replacing $|f(x+t)-f(x-t)|$ by a higher difference.

G. Klein (South Hadley, Mass.).

following Plessner, the so obtained criterion is shown equivalent to the condition $\sum_{k=2}^{\infty}(a_k^2+b_k^2)\log k<+\infty$ of Kolmogorov-Seliverstov as applied to the product of f and the [illegible]

Mathematical Reviews
Vol. 15 No.1
Jan. 1954
Analysis

7-13-54

Math 3

Ul'yanov, P. L. On trigonometric series with monotonically decreasing coefficients. Doklady Akad. Nauk SSSR (N.S.) 90, 33–36 (1953). (Russian)

The author considers the functions $f(x)=\sum_{k=1}^{\infty}a_k\cos kx$, $\bar{f}(x)=\sum_{k=1}^{\infty}a_k\sin kx$, under the condition that $a_k\to 0$ and $\sum|\Delta a_n|<\infty$. It is well known that neither series need be a Fourier series under this condition, if integration is Lebesgue integration. The author says that a measurable function $\phi(x)$ is A-integrable on (a, b) if the measure of the set where $|\phi(x)|\geqq n$ is $o(1/n)$ and the Lebesgue integral of the function obtained by truncating $\phi(x)$ at $\pm n$ approaches a limit. [See, e.g. Očan, Mat. Sbornik. N.S. 28(70), 293–336 (1951); these Rev. 13, 20.] The following theorems are given. (1) The series for $f(x)$ and $\bar{f}(x)$ are the A-Fourier series of their sums. (2) If $\phi(x)$ is a function of bounded variation whose conjugate $\bar{\phi}(x)$ is also of bounded variation, $(A)\int_{-\pi}^{\pi}f\bar{\phi}=-(A)\int_{-\pi}^{\pi}\bar{f}\phi$. (3) If $\phi(x)$ is a bounded measurable function, the definition of $\bar{\phi}(x)$ as a Cauchy integral agrees almost everywhere with the definition of $\bar{\phi}(x)$ as an A-integral. (4) For all x, $\bar{f}(x)$ is the negative of the A-conjugate of $f(x)$; except perhaps at $0, \pm\pi$, $f(x)$ is the A-conjugate of $\bar{f}(x)$.

R. P. Boas, Jr. (Evanston, Ill.).

UL'YANOV, P.L.

USSR/Mathematics - Fourier series FD-1427

Card 1/1 : Pub. 64 - 5/9

Author : Ul'yanov, P. L. (Moscow)

Title : Application of A-integration to a class of trigonometric series

Periodical : Mat. sbor., 35 (77), pp 469-490, Nov-Dec 1954

Abstract : The main results of this work were formulated without proof in the author's article "Trigonometric series with monotonically drcreasing coefficients." DAN SSSR, 90, No 1, 33-36, 1953. In the present work the author gives the principal definitions and cites certain works devoted to the same problem. He proves that $f(x) = a_0 + \Sigma\ a_k \cos kx$ is a Fourier (A) series of f(x) and its sine-conjugate f (x). Thirteen references, 2 USSR.

Institution : ·

Submitted : October 28, 1953

Ulyanov P.L.

Ul'yanov, P. L. Some questions of *A*-integration. Dokl. Akad. Nauk SSSR (N.S.) 102 (1955), 1077–1080. (Russian) 1-F/W

MS

A measurable real-valued function f on $[a, b]$ is said to be A-integrable if

(1) $$m\{x : x \in [a, b], |f(x)| < n\} = o(n^{-1})$$

and

(2) $$\lim_{n\to\infty} \int_a^b \min[\max(f(x), -n), n]dx = (A)\int_a^b f(x)dx$$

exists and is finite. This notion is attributed to Kolmogorov, and differs hardly at all from the Q-integral of Titchmarsh [Proc. London Math. Soc. (2) 29 (1928), 49–80]. [For other applications of this notion, see Ul'yanov same Dokl. (N.S.) 90 (1953), 33–36; Mat. Sb. N.S. 35(77) (1954), 469–490; MR 15, 27; 16, 467.] The author states that Kolmogorov proved property (1) for all functions on $[0, 2\pi]$ conjugate to functions in $L_1(0, 2\pi)$ [Fund. Math. 7 (1925), 24–29], but Kolmogorov seems only to have proved that the left side is $o(n^{-1})$. For $f \in L_1(0, 2\pi)$, let $\bar{f}$ denote the conjugate function of f. Theorem: If $f \in L_1(0, 2\pi)$ and if g and $\bar{g}$ are essentially bounded, then

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(over)

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Ul'yanov, P.L.

$$(A)\int_0^{2\pi} f(x)g(x)\,dx = -\int_0^{2\pi} f(x)\bar{g}(x)\,dx.$$

Theorem: If $f \in L_p(0, 2\pi)$ $(p > 1)$ and f has period 2π, then

$$(A)\int_0^{2\pi} [f(x+t) - f(x-t)]\tfrac{1}{2}\operatorname{ctg}\tfrac{1}{2}t\,dt = -\pi\bar{f}(x)$$

for almost all $x \in [0, 2\pi]$. A formula is also given for inverting the transform $f \to \bar{f}$ $(f \in L_1(-\pi, \pi))$. Proofs are sketched.

E. Hewitt (Princeton, N.J.).

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ULYANOV, P.L.

SUBJECT USSR/MATHEMATICS/Theory of functions CARD 1/2 PG - 182
AUTHOR ULJANOV P.L.
TITLE On the continuation of functions.

PERIODICAL Doklady Akad. Nauk 105, 913-915 (1955)
reviewed 7/1956

The author considers a function $f(x)$ which is defined on $[\alpha,\beta]$ and on $[a,b] \subseteq [\alpha,\beta]$ has the property A. He seeks a function $f_1(x)$ which is defined on $[c,d]$ (where $(c,d) \supset [a,b]$), on $[a,b]$ identical with $f(x)$ and on $[c,d]$ possesses the property A. Beside of $f(x)$ its conjugate function

$$\overline{f}(x) = -\lim_{\varepsilon\to 0} \frac{1}{\pi}\int_\varepsilon^\pi \frac{f(x+t)-f(x-t)}{2\ \mathrm{tg}\ \frac{1}{2}t}\,dt$$

is considered.
For integrable and continuous functions the following theorems are formulated and a sketchy proof is given: 1. Let the periodic function $f(x) \in L(0,2\pi)$ have the property that $f(x)$ and $\overline{f}(x)$ are integrable on $[a,b] \subset [0,2\pi]$ and for a $\varepsilon > 0$ holds:

$$\int_0^n f(b+t)\,dt = 0\left\{\left(\ln\frac{1}{|n|}\right)^{-1-\varepsilon}\right\},\quad \int_0^n f(a+t)\,dt = 0\left\{\left(\ln\frac{1}{|n|}\right)^{-1-\varepsilon}\right\}.$$

Then there exists a function $\varphi(x)$ such that $\varphi(x) = f(x)$ on $[a,b]$ and $\varphi(x) \in L(0,2\pi)$, $\overline{\varphi}(x) \in L(0,2\pi)$. 2. Let $f(x) \in L(0,2\pi)$ be periodic, $f(x)$ and

$\bar{f}(x)$ continuous on $[a,b] \subset [0,2\pi]$. Then $f(x)$ can be continued from $[a,b]$ to $[0,2\pi]$ such that it and its conjugate function are continuous on the whole interval $[0,2\pi]$. 3. Let $f(x) \in L(0,2\pi)$ be periodic, $f(x)$ and $\bar{f}(x)$ essentially bounded on $[a,b] \subset [0,2\pi]$ and

$$\int_0^t f(a+n)\,dn = O(|t|), \qquad \int_0^t f(b+n)\,dn = O(|t|)$$

$$\overline{\lim_{h \to 0}} \left| \int_h^{\pi} \frac{f(a+n)-f(a-n)}{n}\,dn \right| < \infty, \qquad \overline{\lim_{h \to 0}} \left| \int_h^{\pi} \frac{f(b+n)-f(b-n)}{n}\,dn \right| < \infty,$$

then $f(x)$ can be continued from $[a,b]$ to $[0,2\pi]$ such that the property of the essential boundedness for f and $\bar{f}$ remains true.

INSTITUTION: Lomonossov University, Moscow

ABRAMOV, A.A., redaktor; BOLTYANSKIY, V.G., redaktor; VASIL'YEV, A.M., redaktor; MEDVEDEV, B.V., redaktor; MYSHKIS, A.D., redaktor; NIKOL'SKIY, S.M., otvetstvennyy redaktor; POSTNIKOV, A.G., redaktor; PROKHOROV, Yu.V., redaktor; RYBNIKOV, K.A., redaktor; UL'YANOV, P.L., redaktor; USPENSKIY, V.A., redaktor; CHETAYEV, N.G., redaktor; SHILOV, G.Ye., redaktor; SHIRSHOV, A.I., redaktor; SIMKINA, Ye.N., tekhnicheskiy redaktor

[Proceedings of the all-Union Mathematical Congress] Trudy tret'ego vsesoiuznogo Matematicheskogo s"ezda; Moskva iiun'-iiul' 1956. Moskva, Izd-vo Akademii nauk SSSR. Vol.2. [Brief summaries of reports] Kratkoe soderzhanie obzornykh i sektsionnykh dokladov. 1956. 166 p. (MLRA 9:9)

1. Vsesoyuznyy matematicheskiy s"yezd. 3, Moscow, 1956. (Mathematics)

IL'YANOV, P.L.

1-FW

Il'yanov, P. L. On the A-Cauchy integral. I. Uspehi Mat. Nauk (N.S.) 11 (1956), no. 5(71), 223-229. (Russian)

The A-integral of $\phi(x)$ is the limit of the L-integral of the function obtained by truncating $\phi(x)$ at $\pm n$ where the measure of the set where $|\phi(x)| \geq n$ is $O(1/n)$. The author shows that if a real f belongs to ... on the ...

... Cauchy integral, it is represented by the A-Cauchy integral of its boundary values. Various corollaries are obtained. R. P. Boas, Jr. (Evanston, Ill.).

SUBJECT USSR/MATHEMATICS/Fourier series CARD 1/2 PG - 742
AUTHOR ULJANOV P.L.
TITLE On almost everywhere permanently convergent series.
PERIODICAL Mat.Sbornik, n.Ser. 40, 1, 95-100 (1956)
reviewed 5/1957

An almost everywhere permanently convergent function series is a series which converges almost everywhere for an arbitrary transposition of the terms.

Let $\{P_n(x)\}$ (n=0,1,2,...) be a system of polynomials, being defined on [a,b], being complete with respect to L and closed with respect to L^2, which is orthonormalized with the weight $\tau(x)$ ($\tau(x)$ is defined on [a,b], positive and integrable). The series

$$(1) \qquad \sum_{k=0}^{\infty} c_k P_k(x)$$

is called the Fourier series of the integrable function f(x) if

$$c_k = \int_a^b f(x)\tau(x)P_k(x)\,dx \qquad (k=0,1,2,\dots).$$

Let $\omega(\delta, f)$ be the modulus of continuity of f on [a,b] with the length of

steps δ. Joining the results of Kolmogorov (Doklady Akad.Nauk 1, 291-294 (1934)) and Natanson (Doklady Akad.Nauk 2, 209-211 (1934)) the author proves the theorems:

1. If $f(x) \in L(a,b)$ and

$$\omega(\delta, f) = 0\left\{\frac{1}{\ln\frac{1}{\delta}\left(\ln\ln\frac{1}{\delta}\right)^{1+\varepsilon}}\right\} \text{ for } \delta \to +0,$$

then the Fourier series (1) of the function $f(x)$ on $[a,b]$ converges almost everywhere for an arbitrary arrangement of the terms.

2. If $f(x)$ is of bounded variation on a,b and if

$$0 < \tau(x) \leq \frac{A}{\sqrt{(b-x)(x-a)}} \quad \text{for } x \in [a,b],$$

then for every $\epsilon > 0$ there holds

$$\sum_{k=0}^{\infty} |c_k|^{1+\varepsilon} < +\infty \qquad \sum_{k=0}^{\infty} c_k^2 \, k^{1-\varepsilon} < +\infty .$$

INSTITUTION: Moscow.

UL'YANOV, P.L.

A-integral and conjugate functions. Uch. zap. Mosk. un. no.181: 139-157 '56. (MLRA 10:4)
(Fourier's series) (Integrals)

APPROVED FOR RELEASE: 03/14/2001 CIA-RDP86-00513R001857920015-3"

The author proves the theorems announced in Uspehi Mat. Nauk (N.S.) 10 (1955), no. 1(63), 189–191.

R. P. Boas, Jr. (Evanston, Ill.).

UL'YANOV, P. L.

r Transactions of the Third All-union Mathematical Congress (Cont.) Moscow, Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp. There are 6 references, all of them USSR.

Ul'yanov, P. L. (Moscow). About A-integrals of Cauchy.	107-108
Fedorov, V. S. (Ivanovo). On Monogenic Functions.	108-109
Fishman, K. M. (Chernovitsy). On a Class of Hilbert Spaces of Analytic Function.	109
Fuksman, N. A. (Tashkent). About Analytic Functions of Integral Complex Argument.	109-110
Mention is made of Romanov, N. P.	
Khavinson, S. Ya. (Moscow). P. L. Chebyshev's Systems and the Uniqueness of the Best Polynomial Approximation in the Metrics of L_1 Space.	110

Card 34/80

ULYANOV, P.L.

CARD 1/3 PG - 724

SUBJECT USSR/MATHEMATICS/Theory of functions
AUTHOR ULJANOV P.L.
TITLE On Cauchy A-integrals on curves.
PERIODICAL Doklady Akad. Nauk 112, 383-385 (1957)
reviewed 4/1957

In the complex ζ-plane let be given a smooth curve l of the length l_0 beginning in ζ_0 and ending in ζ_0'. Its equation be $\zeta = \tau(s) = \tau_1(s)+i\,\tau_2(s)$, where s is the arc length of ζ_0 to ζ $(\zeta_0 = \tau(0),\ \zeta_0' = \tau(l_0))$. Then the function $f(\zeta) = f_1(s)+if_2(s)$ being defined on l is called A-integrable on l if the functions

$$\varphi_1(s) = \left[f_1(s)\tau_1'(s) - f_2(s)\tau_2'(s)\right]$$

$$\varphi_2(s) = \left[f_2(s)\tau_1'(s) + f_1(s)\tau_2'(s)\right]$$

are A-integrable on the line $0 \le s \le l_0$ (as to the A-integrability on lines compare Titchmarsh, Proc.London Math.Soc. 29, 49 (1929)). The complex number

Doklady Akad. Nauk 112, 383-385 (1957) CARD 2/3 PG - 724

$$I = (A)\int_0^{l_0} \varphi_1(s)ds + i(A)\int_0^{l_0} \varphi_2(s)ds$$

is called the A-integral of the function $f(\zeta)$ on the curve l

$$(A)\int_L f(\zeta)d\zeta = I.$$

With the aid of this definition the following principal result can be formulated: Let l be a closed curve which limits the domain G. Its equation be $\zeta = \tau(s) = x(s)+iy(s)$, where

$$\left|x'(s_2)-x'(s_1)\right| \leq k\left|s_2-s_1\right|^\alpha, \qquad \left|y'(s_2)-y'(s_1)\right| \leq k\left|s_2-s_1\right|^\alpha$$

for all s_1, s_2 and certain constant $k>0$, $\alpha > 0$. If the analytic function $F(z)$ is representable in G by an L-integral of the Cauchy type, i.e. if

$$F(z) = \frac{1}{2\pi i}(L)\int_l \frac{f(\zeta)}{\zeta - z}d\zeta \qquad (z\in G,\ f(\zeta)\in L(l)),$$

then

$$F(z) = \frac{1}{2\pi i} (A) \int_{l} \frac{F_i(\zeta)}{\zeta - z} d\zeta,$$

where $F_i(\zeta)$ are the limit values of the function $F(z)$ if z coming from the interior of G reaches l. Some conclusions are given.

20-4-12/51

UL'YANOV, P.L.

AUTHOR: UL'YANOV, P.L.

TITLE: On Permutations of a Trigonometric System (O perestanovkakh trigonometricheskoy sistemy)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 116, Nr. 4, pp. 568-571 (USSR)

ABSTRACT: Let

(1) $$\frac{a_0}{2} + \sum_{k=1}^{\infty} (a_k \cos k x + b_k \sin k x)$$

be the Fourier series of $f(x) \in L(0, 2\pi)$, $f(x+2\pi) = f(x)$. (1) is called unconditionally convergent almost everywhere if it converges almost everywhere after an arbitrary permutation of the terms. Let $E_n^{(2)}(f)$ be the best approximation of $f(x)$ in the metric of the L^2 by trigonometric polynomials of the order (n-1).

Theorem: If $\sum_{n=10}^{\infty} \frac{(\ln \ln n)^{1+\varepsilon} \ln n}{n} \left\{E_n^2(f)\right\}^2 < \infty$, $\varepsilon > 0$, then (1) converges unconditionally almost everywhere on $[0, 2\pi]$.

Theorem: If for $\varepsilon > 0$ there holds:

$$\int_0^{2\pi} \int_0^{2\pi} \frac{|\ln t| \, |\ln |\ln t||^{1+\varepsilon}}{t} [f(x+t) - f(x-t)]^2 \, dx \, dt < \infty,$$

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On Permutations of a Trigonometric System 20-4-12/51

then (1) is unconditionally convergent almost everywhere on $[0,2\pi]$.

Theorem: There exists a continuous 2π-periodic function $f(x)$ the Fourier series of which after a certain permutation of the terms does not converge on $[0,2\pi]$ for every $q > 2$ in the metric of the L^q.

Several further similar results are given which e.g. generalise well known results due to Marcinkiewicz [Ref 3] and Orlicz [Ref.8].

ASSOCIATION: Moscow State University im. M.V. Lomonosov (Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova)

PRESENTED BY: A. N. Kolmogorov, Academician, April 10, 1957

SUBMITTED: February 28, 1957

AVAILABLE: Library of Congress

Card 2/2

KACHMAZH, S. [Kaczmarz, Stefan]; SHTEINGAUZ, G.; GUTER, R.S. [translator]; UL'YANOV, P.L. [translator]; VILENKIN, N.Ya., red.

[Theory of orthogonal series] Teoriia ortogonal'nykh riadov. Pod red. i s dop. N.IA.Vilenkina. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1958. 507 p. (MIRA 12:11)
(Series, Orthogonal)

NIKOL'SKIY, S.M., otv.red.; ABRAMOV, A.A., red.; BOLTYANSKIY, V.G., red.; VASIL'YEV, A.M., red.; MEDVEDEV, B.V., red.; MYSHKIS, A.D., red.; POSTNIKOV, A.G., red.; PROKHOROV, Yu.V., red.; RYBNIKOV, K.A., red.; UL'YANOV, P.L., red.; USPENSKIY, V.A., red.; CHETAYEV, N.G., red.; SHILOV, G.Ye., red.; SHIRSHOV, A.I., red.; GUSEVA, I.N., tekhn.red.

[Proceedings of the Third All-Union Mathematical Congress] Trudy tret'ego Vsesoiuznogo matematicheskogo s"ezda. Vol.3 [Synoptic papers] Obzornye doklady. Moskva, Izd-vo Akad.nauk SSSR, 1958. 596 p. (MIRA 12:2)

1. Vsesoyuznyy matematicheskiy s"yezd. 3d, Moscow, 1956. (Mathematics--Congresses)

P.L. Ul'yanov

16(1)
AUTHORS: Skoryy, I.A., University Lecturer, and Kopytov, V.D., Scientific Assistant SOV/55-58-2-33/35

TITLE: Lomonosov - Lectures 1957 at the Mechanical-Mathematical Faculty of Moscow State University (Lomonosovskiye chteniya 1957 goda na mekhaniko-matematicheskom fakul'tete MGU)

PERIODICAL: Vestnik Moskovskogo Universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 2, pp 241-246 (USSR)

ABSTRACT: The Lomonosov lectures 1957 took place from October 17 - October 31, 1957 and were dedicated the 40-th anniversary of the October revolution.

16. A.D. Gorbunov, Lecturer and B.M. Budak, Lecturer : Difference Methods for the Solution of Hyperbolic Equations.
17. N.S. Bakhvalov : Number of Calculation Operations for the Solution of Elliptic Equations.
18. V.I. Lebedev, Aspirant : Difference Method for the Solution of the Sobolev-System.
19. Professor Ye.B. Dynkin : Markov Processes and Semigroups.
20. A.G. Kostyuchenko, Candidate of Physical-Mathematical Sciences : Decomposition of Differential Operators With Respect to Generalized Eigenfunctions.
21. F.A. Berezin, Candidate of Physical-Mathematical Sciences: Foundations of the Theory of Spherical Harmonics on Manifolds.
22. V.M. Borok, Aspirant : General Properties of Partial Evolution Systems.
23. V.A. Uspenskiy, Candidate of Physical-Mathematical Sciences : On Constructive Mathematical Analysis.
24. P.L. Ul'yanov, Lecturer : Reversal of Terms in Trigonometric Series.
25. I.G. Petrovskiy, Academician and Ye.M. Landis, Senior Scientific Assistant : On the Number of Boundary Cycles of a Differential Equation of First Order With a Rational Right Side.

The contents of all the lectures have already been published.

Card 5/5

(12)

~~16(1)~~ 16,4100

AUTHOR: Ul'yanov, P.L. SOV/155-58-4-11/34

TITLE: On the Divergence of Orthogonal Series to $+\infty$ (O raskhodimosti ortogonal'nykh ryadov k $+\infty$)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1958, Nr 4, pp 63 - 68 (USSR)

ABSTRACT: Let

$a_n > 0$ and $\sum_{n=1}^{\infty} a_n^2 = \infty$. Then there exists a system $\{\varphi_n(x)\}$ of bounded functions orthogonally normed on $[0,1]$ so that the orthogonal series $\sum_{k=1}^{\infty} b_k \varphi_k(x)$ for every order of the terms diverges everywhere on $[0,1]$ to $+\infty$, if $b_k \geqslant a_k$.

Theorem :
It exists an orthogonal series $\sum_{n=1}^{\infty} c_n \varphi_n(x)$, which for an arbitrary sequence of the terms diverges everywhere on $[0,1]$

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On the Divergence of Orthogonal Series to $+\infty$ SOV/155-58-4-11/34

to $+\infty$, while $\sum_{n=1}^{\infty} |c_n|^{2+\varepsilon} < \infty$ is for every $\varepsilon > 0$.

Theorem : On $[0,1]$ there exists an orthogonal series $\sum_{n=1}^{\infty} c_n \varphi_n(x)$ with the properties: 1.) it diverges to $+\infty$ everywhere on $[a,b] \subset (0,1)$ for arbitrary reversal of the terms 2.) the orthogonally normed system $\{\varphi_n(x)\}$ is bounded on $[0,1]$.

The author mentions D.Ye. Men'shov.

There are 3 references, 2 of which are Soviet, and 1 French.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova (Moscow State University imeni M.V. Lomonosov)

SUBMITTED: June 4, 1958

Card 2/2

SOV/38-22-4-4/6

AUTHOR: Ul'yanov, P.L.

TITLE: On the Series With Respect to a Transposed Trigonometric System (O ryadakh po perestavlennoy trigonometricheskoy sisteme)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya matematicheskaya, 1958, Vol 22, Nr 4, pp 515-542 (USSR)

ABSTRACT: § 1. Theorem: Let $f(x) \in L^2(0,2\pi)$ and for an $\varepsilon > 0$ let be

$$\sum_{n=10}^{\infty} \frac{(\ln\ln n)^{1+\varepsilon}\ln n}{n}\left\{E_n^{(2)}(f)\right\}^2 < \infty,$$

where $E_n^{(2)}(f)$ is the best approximation of $f(x)$ in the metric L_2 by trigonometric polynomials of order $\leq n-1$. Then the Fourier series of $f(x)$ converges absolutely almost everywhere on $[0,2\pi]$ (i.e. under arbitrary transposition of the terms). Theorem: If $f(x) \in L^2(0,2\pi)$ and if for an $\varepsilon > 0$ it holds :

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$$\int_0^{2\pi}\int_0^{2\pi} \frac{|\ln t||\ln|\ln t||^{1+\varepsilon}}{t}\left[f(x+t)-f(x-t)\right]^2 dt\, dx < \infty \text{ , then the}$$

Fourier series of $f(x)$ is absolutely convergent almost everywhere on $[0,2\pi]$. § 2 deals with the summability of the series

$$\frac{a_0}{2} + \sum_{\nu=1}^{\infty} (a_\nu \cos k_\nu x + b_\nu \sin k_\nu x) \text{ , where all } k_\nu \text{ are integer}$$

and different. It is shown, that even the Fourier series with respect to a transposed system also with relatively strong Töplitz methods need no longer be summable.

§ 3 Theorem: There exists a fixed transposed trigonometric system $\{\cos m_\nu x \text{ , } \sin m_\nu x\}$ with the properties 1.) For all $1 \leqslant p < 2$ there exists an $f(x)$ $L^p(0,2\pi)$ with derivatives of arbitrary order continuous on $(0,2\pi)$ and with $f(x) = 0$ for $x \in [1, 2\pi - 1]$; the Fourier series

$$f(x) \sim \frac{a_0}{2} + \sum_{\nu=1}^{\infty} a_{m_\nu} \cos m_\nu x + b_{m_\nu} \sin m_\nu x$$

of which diverges almost everywhere on $[0,2\pi]$ and does not converge in the metric L; also the Fourier series for the conjugate function $\bar{f}(x) = -\frac{1}{\pi}\lim_{\varepsilon\to 0}\int_{\varepsilon}^{\pi}\frac{f(x+t)-f(x-t)}{2\operatorname{tg}\frac{1}{2}t}\,dt$ diverges indefinitely on $[0,2\pi]$ and does not converge in the me. ic L
2.) There exists a continuous function $\varphi(x)$, the Fourier series of which with respect to the system $\{\cos m_\nu x, \sin m_\nu x\}$ does not converge on $[0,2\pi]$ in the metric L^p for any $p>2$. Constructive proof. § 4 brings several conclusions; e.g. it is proved that the transposed system forms in general for $p \in [1,2) + (2,\infty)$ no base in $L^p(0,2\pi)$. Also the Riemannian localization principle does not hold in general for the transposed system. Similar statements are given in the complex domain. Altogether there are given 27 definitions, theorems, conclusions and remarks.

On the Series With Respect to a Transposed Trigonometric System SOV/38-22-4-4/6

There are 12 references, 6 of which are Soviet, and 6 Polish.

PRESENTED: by Aleksandrov, P.S., Academician

SUBMITTED: October 11, 1957

1. Mathematics 2. Trigonometry 3. Fourier's series

Card 4/4

16(1) SOV/38-22-6-4/6

AUTHOR: Ul'yanov, P. L.

TITLE: On Unconditional Convergence and Summability (O bezuslovnoy skhodimosti i summiruyemosti)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya matematicheskaya, 1958, Vol 22, Nr 6, pp 811 - 840 (USSR)

ABSTRACT: The author investigates the connection between the unconditional convergence and summability for trigonometric and orthogonal series. § 1 contains several auxiliary theorems, § 2 considers trigonometric series. Among others it is shown that "unconditional summability" is equivalent to an "unconditional convergence almost everywhere". Furthermore it is shown that the transposed Fourier series of the functions $f(x) \in L^p(0,2\pi)$ for $p > 2$ are in general almost everywhere summable with no Toeplitz method. In § 3 it is investigated under which conditions the results of § 2 can be transferred to orthogonal series. Moreover it is tried to explain why in certain cases the results for orthogonal series deviate from those of trigonometric series. 11 theorems and more than 20 lemmata, consequences, etc are brought.

Card 1/2

There are 11 references, 5 of which are Soviet, 5 Polish, and 1 German.

PRESENTED: by S.L. Sobolev, Academician

SUBMITTED: September 29, 1957

UL'YANOV, P. L., Doc Phys-Math Sci (diss) -- "A Cauchy-type integral. Convergence and summability". Moscow, 1959. 8 pp (Moscow Order of Lenin and Order of Labor Red Banner State U im M. V. Lomonosov), 150 copies (KL, No 9, 1960, 121)

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SOV/155-59-1-11/30

~~16(1)~~ 16,4000

AUTHOR: Ul'yanov, P.L.

TITLE: Unconditional Convergence With Respect to $+\infty$

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye nauki, 1959, Nr 1, pp 71 - 80 (USSR)

ABSTRACT: The series $\sum\limits_{n=1}^{\infty} f_n(x)$ $(x \in E)$ is said to be unconditionally convergent with respect to $+\infty$ on the set E if for an arbitrary arrangement of the terms on E it converges to $+\infty$. Basing on his earlier results the author proves six theorems on series unconditionally convergent with respect to $+\infty$ and other connected questions.

Theorem 1 : To every sequence $\{a_n\}$ with $\sum\limits_{n=1}^{\infty} a_n^2 = \infty$ there exists an orthogonal series $\sum\limits_{n=1}^{\infty} a_n \varphi_n(x)$ which on $[0,1]$ is

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Unconditional Convergence With Respect to + ∞ SOV/155-59-1-11/30

unconditionally convergent with respect to + ∞.
Theorem 2 : To every sequence $\{a_n\}$ with

(2) $$\sum_{n=1}^{\infty} a_n^2 = \infty$$

there exists an orthogonal series

(3) $$\sum_{n=1}^{\infty} a_n \varphi_n(x)$$

which everywhere on $[0,1]$ is summable with a certain Toepplitz-method T, while no subsequence $S_{k_i}(x) = \sum_{n=1}^{k_i} a_n \varphi_n(x)$ converges in any point $x \in [0,1]$.

Theorem 3 : Let $\{\varphi_n(x)\}$ be a bounded orthogonally normed system on $[0,1]$. Then there exists a number $\delta > 0$ so that

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if the series

$$(22)\qquad \sum_{n=1}^{\infty} a_n \varphi_n(x) \quad , \quad |\varphi_n(x)| \le A$$

has partial sums for an arbitrary arrangement of the terms $\sum_{i=1}^{\infty} a_{k_i} \varphi_{ki}(x)$ satisfying the inequation

$$(23)\qquad \lim_{N \to \infty} \sum_{i=1}^{N} a_{k_i} \varphi_{ki}(x) > -\infty \quad \text{for} \quad x \in E \ ,$$

where $m\,E > 1 - \delta$, then

$$(24)\qquad \sum_{n=1}^{\infty} |a_n| < \infty$$

i.e. the series (22) converges absolutely on $[0,1]$. From

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Unconditional Convergence With Respect to $+\infty$ SOV/155-59-1-11/30

this theorem there results as a special case a theorem of Privalov [Ref 4].

Theorem 4 : If $\{\varphi_n(x)\}$ is a bounded orthogonally normed system on $[0,1]$, then there exists no series $\sum_{n=1}^{\infty} a_n \varphi_n(x)$ which on a set $E \subset [0,1]$ with $m E = 1$ is unconditionally convergent with respect to $+\infty$.

Theorem 6' : There exists no trigonometric series

$$\sum_{n=1}^{\infty} (a_n \cos 2\pi nx + b_n \sin 2\pi nx)$$ which on E with $m E > 0$ is unconditionally convergent with respect to $+\infty$.

The author mentions Z.N. Kazhdan.

There are 5 references, 3 of which are Soviet, 1 Polish and 1 American.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov)

SUBMITTED: January 19, 1959

Card 4/4

UL'YANOV, P.L.

Local properties of convergent Fourier series. Uch.zap.Mosk. un. no.186[a]:71-82 '59. (MIRA 13:6)
(Fourier's series)

69472

16.4200 S/055/59/000/05/004/020

AUTHOR: Ul'yanov, P. L. 16

TITLE: Singular Integrals and Fourier Series 16

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, No. 5, vol. 14 pp. 33-42

TEXT: The author constructs a continuous function f(x) for which the limit

$$(5) \qquad \lim_{h \to 0} \int_h^{\pi} \frac{f(x+t) + f(x-t) - 2f(x)}{t}\, dt$$

exists for no x. The Fourier series of this function, however, is uniformly convergent. Moreover it is shown that the functions f(x) with these properties form a set of first category in the set of the continuous 2π-periodical functions. Furthermore it is proved: Theorem 2: There exist two conjugate continuous periodical functions $F_1(x)$ and $F_2(x)$ with the properties:

1.) $\int_0^{\pi} \frac{|F_i(x+t) - F_i(x-t)|}{t}\, dt = \infty$ for all x; i = 1,2

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2.) $\lim\limits_{h \to 0} \int\limits_{h}^{\pi} \frac{F_i(x+t) - F_i(x-t)}{t} dt$ exists for all x; $i = 1,2$

3.) The Fourier series of $F_1(x)$ and $F_2(x)$ converge uniformly on $[0,2\pi]$.

The author mentions N. N. Luzin and Kolmogorov. There are 6 references: 2 Soviet, 3 Polish and 1 English

SUBMITTED: October 12, 1956

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SOV/38-23-5-8/8

AUTHOR: Ul'yanov, P.L.

TITLE: Unconditional Summability

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya matematicheskaya, 1959, Vol 23, Nr 5, pp 781 - 808 (USSR)

ABSTRACT: The paper contains proofs and some generalizations of the questions already treated by the author in [Ref 4,5,6] concerning the unconditional summability of function and numerical series, whereby the notion of summability is somewhat extended. Altogether the author gives eight theorems, eleven conclusions and ten lemmata. He mentions I.I. Volkov and A.M. Olevskiy.
There are 12 references, 6 of which are Soviet, 3 Polish, 2 English, and 1 American.

PRESENTED: by A. N. Kolmogorov, Academician

SUBMITTED: December 7, 1958

Card 1/1

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C111/C222

AUTHOR: Ul'yanov, P. L.

TITLE: Convergence and summability

PERIODICAL: Referativnyy zhurnal, Matematika, no. 2, 1962, 12-13, abstract 2B59. ("Tr. Mosk. matem. o-va," 1960, 9, 373-399)

TEXT: This paper is a continuation of the author's examination of unconditionally summable (in one sense or another) function series (Rzh. Mat., 1960, 7396). By $B = \| B_{nm} \|$ linear regular summation methods with the aid of factors are denoted. $B^{*} = \| B_{nm} \|$ denotes methods which satisfy the conditions

$$\lim_{n \to \infty} B_{nm} = 1 \quad (m = 0,1,2,\ldots), \qquad (1).$$

$$\lim_{m \to \infty} B_{nm} = \gamma_n, \quad \lim_{n \to \infty} \gamma_n = 0$$

B^{**} denotes methods having matrices which satisfy (1). By $T^{*} = \| a_{nm} \|$

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linear Toeplitz methods are denoted for which

$$\lim_{n \to \infty} a_{nm} = 0 \quad (m = 0,1,\ldots), \qquad \lim_{n \to \infty} \sum a_{nm} = 1 .$$

Function series

$$\sum_{n=0}^{\infty} f_n(x) \quad (x \in E) \tag{2}$$

are considered, where the $f_n(x)$ may not be measurable. The series

$$\sum_{k=0}^{\infty} f_{n_k}(x)$$

is called a partial series of the first kind of (2), and the series

$$\sum_{n=0}^{\infty} \delta_n f_n(x), \quad \delta_n = 0, \text{ or } 1$$

is a partial series of the second kind of (2). The series

$$\sum f_{\nu_k}(x)$$

resulting by rearranging the terms of (2) is called a weak rearrangement of (2) if the sequence $\{\nu_k\}$ splits into finitely many increasing sequences. If for every weak rearrangement of (2) the B-means $\sigma_N(x)$ of the resulting series ($\sigma_N(x)$ is understood in the sense of convergence with respect to the outer measure) converge for $N \to \infty$ on E (almost everywhere on E) with respect to the outer measure, then (2) is weakly, unconditionally B-summable with respect to the outer measure on E (almost everywhere on E). The weak unconditional B^*-, B^{**}-, and T^*- summability with respect to the outer measure on E, or almost everywhere on E, are defined in analogy.

Theorem 1: If the series

$$\sum_{n=0}^{\infty} \varphi_n(x) \quad (x \subseteq E)$$

is weakly, unconditionally B^{**} - summable (T^*- summable) on E with

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respect to the outer measure, then

$$\Psi_n(x) = f(x) + \eta_n(x), \quad x \in E$$

where f(x) is a finite function on E, and the series

$$\sum_{n=0}^{\infty} \eta_n(x)$$

converges unconditionally on E according to the outer measure. If the method B^* (method T^*) does not sum-up the series

$$\sum_{n=0}^{\infty} 1 \qquad (3)$$

then

$$f(x) \equiv 0, \ x \in E \ .$$

Theorem 5: If the series

√+

$$\sum_{n=0}^{\infty} \psi_n(x) \quad (x \in [0,1])$$

is such that each of its partial series of the first kind on $[0,1]$ is B^{**}- summable with respect to the outer measure, then

$$\psi_n(x) = f(x) + \eta_n(x)$$

where $f(x)$ is a finite function, and the series $\sum_{n=0}^{\infty} \eta_n(x)$ converges on $[0,1]$ unconditionally with respect to the outer measure. Here $f(x) = 0$ if (3) is not B^{**} - summable.

Theorem 7: If the series

$$\sum_{i=0}^{\infty} f_i(x), \quad x \in E \tag{4}$$

is such that each of its partial series of the second kind is B^{**} - summable on E with respect to the outer measure, then (4) is uncondi-

tionally convergent on E with respect to the outer measure.

A few conclusions are drawn from the stated theorems. The unconditional summability almost everywhere and the case of numerical series are considered. Applications of the obtained results are given regarding orthogonal series and series of the type

$$\sum_{n=0}^{\infty} a_n \varphi(\lambda_n x + \beta_n)$$

where $\varphi(x)$ is a periodic function, the integral of which is 0.

[Abstracter's note: Complete translation.]

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AUTHOR: Ul'yanov, P.L.

TITLE: Convergence and summability

SOURCE: Moskovskoye matematicheskoye obshchestvo. Trudy, v. 9, 1960, 373 - 399

TEXT: The results of this article were reported to the Moscow Mathematical Association on November 24, 1959. The author defines $B = //B_{n,m}//$ as the methods satisfying

$$\lim_{n\to\infty} B_{n,m} = 1 \quad (m = 0, 1, \ldots) \qquad (1)$$

and

$$\lim_{n\to\infty} B_{n,m} = \gamma_n, \quad \lim_{n\to\infty} \gamma_n = 0. \qquad (2)$$

If only (1) is satisfied, the method is denoted by B^{**}, $T^{*} = a_{n,m}$ denotes the linear methods of Teplits

$$\lim_{n\to\infty} a_{n,m} = 0 \quad (m = 0, 1, \ldots) \qquad (3)$$

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Convergence and summability

$$\lim_{n \to \infty} \sum_{m=0}^{\infty} a_{n,m} = 1. \tag{4}$$

The author then states and proves the following theorems: Theorem 1: If the series

$$\sum_{n=0}^{\infty} \psi_n(x) \qquad (x \in E) \tag{19}$$

is weakly absolutely B** - summable (T* summable) on E according to the lower measure that

$$\psi_n(x) = f(x) + \eta_n(x) \qquad (x \in E) \tag{20}$$

where f(x) is a finite function on E and

$$\sum_{n=0}^{\infty} \eta_n(x) \tag{21}$$

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is absolutely convergent on E according to the lower measure. Also, if the method B** (T*) does not sum the series

$$\sum_{n=0}^{\infty} 1 \qquad (28)$$

then $f(x) \equiv 0$ for $x \in$ E. Theorem 2: If series (19) consists of metric functions and is weakly absolutely B**-summable (T*-summable) on E according to the measure (20), then series (21) is absolutely convergent on E according to the measure and

$$\sum_{n=0}^{\infty} \eta_n^2(x) < \infty \qquad (29)$$

almost everywhere on E. Also, if B** (T*) does not sum the series (22) then $f(x) \equiv 0$ on E. Theorem 3: If near the terms of the series

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Convergence and summability S/550/60/009/000/004/008 D251/D305

$$\sum_{n=0}^{\infty} \psi_n(x) \qquad (x \in [0, 1]) \tag{30}$$

there are infinitely many metric functions and the series (30) is weakly absolutely B*-summable (T*-summable) almost everywhere on [0, 1], then

$$\psi_n(x) = f(x) + \eta_n(x), \quad (x \in [0, 1]) \tag{31}$$

where f(x) is a metric finite function on [0, 1] and the series

$$\sum_{n=0}^{\infty} \eta_n(x) \tag{32}$$

is weakly absolutely convergent almost everywhere on [0, 1]. If B* (T*) does not sum (22) then $f(x) \equiv 0$. The result of A.M. Olevskiy (Ref. 15: DAN 125, No. 2, 1959, 269-272) is mentioned in the discussion on this theorem. Theorem 4: There exists a regular me-

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Convergence and summability

thod $B = //B_{n,m}//$ and an orthogonal series

$$\sum_{n=0}^{\infty} a_n \varphi_n(x) \quad (a_n \varphi_n(x) \to 0 \text{ on } [0, 1]) \tag{33}$$

which diverges everywhere on [0, 1] and which nevertheless is absolutely B-summable almost everywhere on [0, 1]. The orthogonal series of Men'shov is used in the proof (Ref. 14: Kachmazh S., and G. Shteyngauz, Teoriya ortogonal'nykh ryadov (Theory of Orthogonal Series) M., Fizmatgiz, 1958). Theorem [illegible]: If the series

$$\sum_{n=0}^{\infty} \psi_n(x) \qquad (x \in [0, 1]) \tag{48}$$

is such that any of its partial series of the first kind are B**-summable on [0, 1] according to the lower measure

$$\psi_n(x) = f(x) + \eta_n(x)$$

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D251/D305

Convergence and summability

where f(x) is a finite function and the series

$$\sum_{n=0}^{\infty} \eta_n(x)$$

is absolutely convergent on [0, 1] according to the lower measure. f(x) = 0 if (22) is not B**-summable. Theorem 6: There exists an orthogonal series

$$\sum_{n=0}^{\infty} c_n\varphi_n(x) \quad (c_n\varphi_n(x) \to 0 \text{ on } [0, 1]), \tag{56}$$

and which nevertheless is such that any one of its partial series of the first kind is (C, 1)-summable almost everywhere on [0, 1] [Abstractor's note: (C, 1) summability not defined]. Theorem 7: If the series

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Convergence and summability

$$\sum_{i=0}^{\infty} f_i(x) \quad (x \in E) \tag{70}$$

is such that any of its partial series of the second kind is B**-summable on E according to the lower measure, then (70) is absolutely convergent on E to the lower measure. Theorem 8: If series (70) consists of metric functions on [0, 1] and any of its partial series of the second kind is B**-summable on [0, 1], then this series is absolutely convergent on [0, 1] according to the measure, and

$$\sum_{i=0}^{\infty} f_i^2(x) < \infty \text{ for almost all } x \in [0, 1] \tag{72}$$

Theorem 9: If the series

$$\sum_{i=0}^{\infty} f_i(x) \quad (x \in E) \tag{75}$$

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